

MARCH/FY06

**FORT CHAFFEE MTC
Arkansas**

**Army Defense Environmental
Restoration Program
Installation Action Plan**

Final 1 Jun 2006

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Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multi-year Cleanup Program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern, and proposes a comprehensive, installation-wide approach, with associated costs and schedules, to conduct investigations and necessary remedial actions.

In an effort to coordinate planning information between the restoration manager, US Army Environmental Center (USAEC), Fort Chaffee MTC, NGB and Base Realignment and Closure (BRAC) Division an IAP was completed. The IAP is used to track requirements, schedules and tentative budgets for all Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

The following agencies contributed to the formulation and completion of this Installation Action Plan during a book update:

Company/Installation/Branch

Army BRAC Office

Engineering and Environment, Inc. for USAEC

ICI, llc for USAEC

Acronyms & Abbreviations

ADEQ	Arkansas Department of Environmental Quality
AEDB-R	Army Environmental Database-Restoration
AOC	Area of concern
ARANG	Arkansas Air National Guard
ARARNG	Arkansas Army National Guard
AST	Aboveground storage tank
BRAC	Base Realignment and Closure
BTT	Base Transition Team
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COR	Contract Office Representative
CFR	Code of Federal Regulations
CTC	Cost-to-Complete
DERP	Defense Environmental Restoration Program
DOD	Department of Defense
DSERTS	Defense Sites Environmental Restoration Tracking System
EBS	Environmental Baseline Survey
EE/CA	Engineering Evaluation/Cost Analysis
EOD	Explosive ordnance disposal
ER,A	Environmental Restoration, Army
FS	Feasibility Study
FTCH	Fort Chaffee (abbreviation in AEDB-R)
FY	Fiscal Year
HSWA	Hazardous and Solid Waste Amendments
HW	Hazardous Waste
IAP	Installation Action Plan
IRP	Installation Restoration Program
JRTC	Joint Readiness Training Center
LF	Landfill
LTM	Long-Term Management
MCL	Maximum contaminant level
MTC	Maneuver Training Center
NA	Not Applicable
NFA	No further action
NGB	National Guard Bureau
NPL	National Priority List
OB/OD	Open burn/open detonation
OTS	Oil Trenches
OWS	Oil/Water Separator
PA	Preliminary Assessment
PBC	Performance Based Contract
POW	Prisoner-of-war
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operation)
RAB	Restoration Advisory Board
RC	Response complete

Acronyms & Abbreviations

RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy in Place
ROD	Record of Decision
SI	Site Inspection
SVOC	Semi-volatile organic compound
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
TBD	To Be Determined
TCE	Trichloroethylene
TRADOC	Training and Doctrine Command
TRC	Technical Review Committee
USACE	U.S. Army Corps of Engineers
USAEC	U.S. Army Environmental Center
USEPA	U.S. Environmental Protection Agency
UST	Underground storage tank
UXO	Unexploded ordnance
VOC	Volatile organic compound

Installation Information

Installation Locale: Fort Chaffee Maneuver Training Center (MTC) is located on 64,638 acres of land in Sebastian and Franklin counties, Arkansas. Highway 22 is the northern boundary of the installation, except for a small portion that extends north of the highway. Highway 96 bisects the installation in a north-south direction. Fort Chaffee MTC is approximately seven miles southeast of Ft. Smith (1990 population 72,798), the second largest city in Arkansas.

Installation Mission: Train Armored Divisions

Lead Organization: Headquarters, National Guard Bureau

Lead Executing Agencies:

The contract officer representative (COR) is USAEC and is the executing agency through a Performance Based Contract

Regulatory Participation

Federal: U.S. Environmental Protection Agency (USEPA), Region 6

State: Arkansas Department of Environmental Quality (ADEQ)

State of Arkansas Regulation 23 (Resource Conservation and Recovery Act [RCRA] 40 Code of Federal Regulations [CFR] 265)

National Priorities List (NPL) Status: Not on NPL.

Installation Restoration Advisory Board (RAB)/Technical Review Committee

(TRC)/Technical Assistance for Public Participation (TAPP) Status: No RAB, TRC or TAPP exist at Fort Chaffee

Installation Program Summaries

IRP

Primary Contaminants of Concern: VOCs, Metals, Pesticides

Affected Media of Concern: Soil, Groundwater, Surface Water

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 2008/2030

Funding to date (up to FY05): \$ 956,870

Current year funding (FY06): \$ 0

Cost-to-Complete (FY07+): \$ 35,330 (remaining optional Contract Line Item Numbers)

Cleanup Program Summary

Installation Historic Activity

On September 9, 1941, Federal Judge John E. Miller signed the order granting the government possession of the land, which was designated Camp Chaffee, after the first Chief of Armored Forces, Major General Adna R. Chaffee. The government had to acquire numerous tracts of land before the establishment of Camp Chaffee. These tracts varied in size from 40 to 80 acres and up to several thousand acres. Most of the tracts were farm units that consisted of small fields of cropland (cotton and corn), pasture, farm wood lots, and small irregular-shaped areas of abandoned cropland. After acquiring the land from the owners, the government razed most of the tenant houses, fences, and other improvements. The original land acquisition amounted to approximately 76,075 acres. Because of disposals, corrected surveys, and audits, the number was eventually reduced to 71,373 acres.

Construction began in September, and the first troops arrived on December 7, 1941. The mission was to train armored divisions. Camp Chaffee also was used as a prisoner-of-war camp during the 1940s. After World War II, Camp Chaffee was placed in an inactive status in 1946. It was reactivated in June 1948, as the home of the 5th Armored Division. In February 1950, Camp Chaffee was once again deactivated. The Korean War caused reactivation in August 1950.

On March 21, 1956, Camp Chaffee was redesignated Fort Chaffee and became a permanent installation. In June 1959, Fort Chaffee became inactive and placed in caretaker status until October 1961. At this time, it was assigned the mission to train the 100th Division. In 1962, the mission went to the 3rd Corps Artillery and the 19th Corps Reserve Unit. In June 1965, Fort Chaffee was once again placed in caretaker status.

During November 1974, Fort Chaffee was redesignated U.S. Army Garrison, Fort Chaffee (semi-active). In 1975, Fort Chaffee became a Refugee Processing Center. More than 50,000 Indochina refugees were processed. In May 1980, Fort Chaffee once again became a Refugee Processing Center, processing more than 25,000 Cuban refugees by 1982.

In 1986, the Army selected Fort Chaffee as a site for the Joint Readiness Training Center (JRTC). The mission was to train troops under simulated combat conditions. During 1993, JRTC was moved to Fort Polk, Louisiana.

Activities at Fort Chaffee have generated listed hazardous and potentially listed and/or characteristic hazardous wastes, including spent degreasers, solvents, battery acid, contaminated fuels, and minor quantities of other potentially hazardous wastes.

Fort Chaffee was included on the 1995 Base Realignment and Closure (BRAC) list. The Enclave Area, consisting of 64,638 acres, was transferred from Department of the Army, TRADOC, to the ARARNG on October 1, 1997, at which time the name was changed to Fort Chaffee MTC.

Cleanup Program Summary

Fort Chaffee MTC is an active installation, consisting of 64,638 acres, with a mission to support the military's training needs. Tenant organizations are also an important component of Fort Chaffee MTC. Army National Guard and U.S. Army Reserve units use the site for training. Active Army units also do rotational training. Razorback Range, the Arkansas Air National Guard's Weapons Gunnery Range, is located on Range 87, in the east area of Fort Chaffee MTC. The 120th Infantry Brigade is located in the 2500 area. The following additional tenants are accommodated:

- U.S. Army 120th Infantry Brigade;
- National Guard Morale, Welfare and Recreation;
- The Arkansas Game and Fish;
- National Weather Service;
- Navy Seabee;
- Webster University;
- 142 Field Artillery Brigade; and
- Department of Energy.

Previous funding for Fort Chaffee was handled by the Department of Army, TRADOC. All BRAC-funded work that was initiated prior to turnover of property to Fort Chaffee MTC is complete.

FY00 through FY03 funding was handled under the Installation Restoration Program of the NGB.

The future funding will be handled by Army Environmental Center for NGB.

IRP

- Prior Year Progress: Completed PBC contracting action in conjunction with Camp Crowder 2005.
- Future Plan of Action: The work contracted through the PBC will be conducted at the Former POW Landfill (FTCH-028).

FORT CHAFFEE MTC

Installation Restoration Program

Total AEDB-R IRP Sites / AEDB-R sites with Response Complete: 21/20

Different Site Types:

2 ASTs	2 Burn Areas
2 Disposal Pit/Dry Wells	1 Explosive Ordnance Disposal Area
1 Incinerator	5 Landfills
1 Oil/Water Separator	1 Soil Contamination After Tank Removal
1 Spill Site Area	1 Storage Area
1 Surface Disposal Area*	1 Waste Line
2 Waste Treatment Plant	

*Defoilant Spray Area FTCH-41

Most Widespread Contaminants of Concern: VOCs, SVOCs, Metals

Media of Concern: Soil, Groundwater, and Surface Water

Completed Removal (REM)/Interim Remedial Action (IRA)/Remedial Action (RA):

1988/90	FTCH-26, Barrel Removal (Between 1988 and 1990)	Total Cost \$N/A
1993	FTCH-20 Soil and Burn Residue Removal	Total Cost N/A
1997/98	FTCH-39, Soil Excavation (1997)	Total Cost \$410,250
	FTCH-20, Debris and Burn Pan Removal (1997)	Total Cost \$46,000
	FTCH-34, UST and OWS Removal or In-place closure	Total Cost \$285,052
	FTCH-40, Fillstand Removal (1997 to 1999)	Total Cost \$468,380
1998	FTCH-35, UST Removals	Total Cost \$410,262
	FTCH-21D, Oil Storage Building Razed	Total Cost \$N/A

Total IRP Funding

Prior years (up to FY05):	\$956,870
Current year funding (FY06):	\$ 0
Future Requirements (FY07+):	\$ 35,330
Total:	\$992,200

Duration of IRP

Year of IRP Inception: 1987
 Year of IRP RIP/RC: 2008/2030
 Year of IRP Completion including Long-Term Management (LTM): 2030

IRP Contamination Assessment

IRP Contamination Assessment Overview

Fort Chaffee MTC had a total of 21 Defense Sites Environmental Restoration Tracking System (DSERTS) which has been replaced by the Army Environmental Database-Restoration (AEDB-R) including landfills, burn areas, a disposal pit, a surface disposal area, aboveground storage tank (AST), underground storage tank (UST), sanitary waste line, and waste treatment facility.

As mandated by Congress in 1986, the Department of Defense (DOD) created and initiated implementation of the Defense Environmental Restoration Program (DERP). The Army program at active installations is referred to as the Installation Restoration Program (IRP). According to Congressional mandate, the IRP is to be carried out in a manner consistent with Section 120 of CERCLA.

The IRP effort at Fort Chaffee MTC began in 1987 and has continued to the present, with major milestones summarized as follows:

An evaluation of solid waste management units (SWMUs) was completed in 1988 as part of an Army-wide effort to meet requirements under the Hazardous and Solid Waste Amendments (HSWA). Thirty-two SWMUs were identified (at Fort Chaffee proper). A follow-up investigation targeted 12 of the 32 SWMUs. The report concluded that no sites required further investigation.

A RCRA Facility Assessment (RFA) was completed in 1990. The RFA evaluated the 32 previously identified SWMUs, and identified two additional SWMUs and four areas of concern (AOCs). The RFA recommended no further action (NFA) for 17 SWMUs and RCRA Facility Investigations (RFIs) for 17 SWMUs.

A RFI was completed in 1993 for the Arkansas Air National Guard Burn Pit (FTCH-04), the East and West Land Application Sites (EBS-20 and EBS-08, respectively), and Buildings 145 and 2350 (part of AOC-2). Buildings 145 and 2350 are not part of Fort Chaffee MTC. The report concluded that none of the four sites posed a threat to human health or the environment.

A RFI was completed in 1996 for the Open Burning/Open Detonation (OB/OD) Area (FTCH-20).

A post-wide Environmental Baseline Survey (EBS) completed in 1996 identified 29 additional areas that required further assessment and/or investigation.

A Closure Report for FTCH-04 was prepared in 1998. With the agreement of ADEQ, it was amended in April 2001 to conclude that No Further Action is required at this site. The Base Transition Team (BTT) conducted Remedial Investigations (RIs) in 1998-2000 for many of the sites that required further evaluation.

AR ARNG began an Enhanced PA/SI of all Enclave sites in 1998. Due to the transfer and closure of many sites, a revised PA/SI was submitted to ADEQ in July 2003. Of the 34 SWMUs, 4 AOCs, and 29 additional sites, 26 Enclave sites were transferred from TRADOC to the AR ARNG at Fort Chaffee MTC.

IRP Contamination Assessment

The BTT initiated environmental investigations and cleanup activities at many of the Enclave sites prior to the transfer, and continued work at some of them using previously obligated funds. The BTT has issued Records of Decision (RODs) for No Further Action (NFA) at 20 Enclave sites. Two Enclave sites (FTCH-21E and FTCH-42) were returned to TRADOC, to be cleaned up by the BTT and excessed to the public.

The BTT negotiated a NFA closure for FTCH-04. The ARARNG will include the site in a future ROD. The ARARNG investigated the remaining three sites in a PA/SI.

IRP Cleanup Exit Strategy:

Only 1 IRP site, the former POW Solid Waste Landfill (FTCH-28), remains open and has future funding. The presumptive remedial action at FTCH-28 is to cap the landfill and minimize the disturbance of material in the landfill as much as practicable and promote positive overland flow to minimize infiltration through the refuse in the landfill trenches.

No Date

- Fort Chaffee MTC PA/SI
- USAEHA: Geohydrologic Study No. 38-26-0337-89
- Project Work Plan Excavation of Oil and Contaminated Soil Oil Trenches Site 35
- USAEHA: RCRA Facility Assessment, Doc. No. 38-26-8818-90

1969

- Info from Preliminary Report Description of Current Conditions: October

1990

- PRC Environmental Management Inc.: 1990 RCRA Facility Assessment: August

1993

- Info from Solid Waste Management Unit Synopsis Draft RCRA 3008 (h) Order: June
- USAEHA: Geohydrologic Study No. 38-26-KV45-93, March 17-28

1995

- Paul McKee: Hydrogeology and Simulation Around Sewage Lagoons in the Alluvial Basin of the Arkansas River, Arkansas (Master of Science Thesis)

1996

- USGS: Preliminary Report: RCRA Facility Investigation, Site 39 COTS
- OHM Remediation Services Corp.: Info from Draft Technical Evaluation and Action Level Recommendation Report for the Active USTs: August
- Environmental Baseline Survey: October
- Info from Preliminary Report Description of Current Conditions: October
- USGS: Preliminary Report: Description of Current Conditions: October
- USACE: RI Second RA and Feasibility Study for Contaminated Oil Trenches: December

1997

- Closure Report UST Site Number 5830, Project Number CHAS950005: January
- Stormwater-runoff Monitoring at the Fort Chaffee Facility, United States Geological Survey Administrative Report: April
- Closure Report UST Site Number B2350, Project Number CHAS950005: June

1998

- Remedial Investigation Report Site 21, Project Number CHAS030001: February
- Remedial Investigation Report Site 17, Project Number CHABS950031: March
- RI Report Site 43/44 East and West Land Application Areas, Project Number CHABS950031: April
- Defense Environmental Restoration Program Non-Evaluated Sites Investigation Report: May
- USACE: Tulsa District Memo: August

1999

- Remediation Summary Report, Removal of Fuel Transmission Lines and Fill Stands, Site FTCH-40: August

2000

- Remedial Investigation Report, East Land Application Area, Site FTCH-43: February
- Final Data Summary Report: May

2001

- Closure Report for Burn/Burial Pits Site 4, May 1998 (amended April 2001): April

FORT CHAFFEE MTC

Installation Restoration Program Site Descriptions

FTCH-28

PRISONER OF WAR CAMP SOLID WASTE LF

SITE DESCRIPTION

FTCH-28 is a solid waste landfill operated for the purpose of disposing debris from the German Prisoner-of-War (POW) camp. The landfill consists of trenches, with total dimensions of approximately 200 feet by 600 feet. Little is known about specific materials disposed in the landfill. No records of volumes or types of wastes are available. According to Fort Chaffee documentation, the operation has not been active since the 1960s.

Groundwater sampling during the 1988 and 1995 investigations indicated no release of hazardous constituents to the groundwater. A file memorandum (U.S. Army Corps of Engineers [USACE] Tulsa District, August 13, 1998) documents a 1998 sampling event involving three reddish surface leachate seeps at the edge of the landfill (two along the eastern perimeter and one along the southern perimeter). Analytical parameters included metals, VOCs, and SVOCs. The results of the sampling indicate that low levels of metals were detected, with drinking water MCLs exceeded by beryllium, lead, and nickel in one sample and beryllium in a second sample. In 1999, the BTT installed three monitor wells, collected eight groundwater samples and nine subsurface soil samples, and delineated the landfill extent.

CLEANUP STRATEGY

A PA/SI Report was submitted to ADEQ, recommending NFA. Metals are seeping from the landfill, but do not appear to impact surface water. In order to eliminate seepage, the presumptive remedial action at the former POW Solid Waste Landfill is to cap the landfill and minimize the disturbance of material in the landfill as much as practicable and promote positive overland flow to minimize infiltration through the refuse in the landfill trenches. Cap maintenance will be performed following the installation of the cap.

This is part of a Performance Based Contract (PBC) action with Camp Crowder, MO. This PBC was awarded in FY05.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: Medium

CONTAMINANTS OF CONCERN

VOCs, SVOCs, Metals

MEDIA OF CONCERN: Soil,
Groundwater, Surface Water

Phases	Start	End
PA.....	198805	198809
SI.....	199804	200008
RD	200510	200601
RA(C)	200602	200709
RA(O)	200710	203009

RIP DATE: 200710

RC DATE: 203009

FTCH-41 DEFOLIANT SPRAY AREA

SITE DESCRIPTION

Six potential defoliant spray areas at Fort Chaffee MTC were identified on a 1963 Fort Chaffee map located in the Fort Chaffee Museum, according to the 1996 environmental baseline survey (EBS). Defoliant spray testing was conducted in the 1960s by aircraft spraying, according to facility personnel. Four of the defoliant spray areas occur in the Enclave Area. The vegetated areas in which defoliant spray testing was conducted remained dead for an unknown amount of time. However, trees and bushes have since overgrown the spray areas.

The BTT investigated the two sites on excess property. Based on the absence of detected contamination, they were closed out in a record of decision (ROD) dated February 8, 2000. ARARNG conducted a Site Inspection at the four Enclave Area sites in 2002. Low levels of herbicides were detected in soil.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: Low

CONTAMINANTS OF CONCERN:
Herbicides

MEDIA OF CONCERN: Soil

<u>Phases</u>	<u>Start</u>	<u>End</u>
PA.....	199309	199405

RC DATE: 199903

CLEANUP STRATEGY

A PA/SI Report was submitted to ADEQ, recommending NFA.

This site will be addressed with Land Use Controls. This is part of a Performance Based Contract (PBC) action with Camp Crowder, MO. This PBC was awarded in FY05.

IRP No Further Action Sites Summary

AEDB-R	Site Title	Documentation/Reason for NFA	RC Date
FTCH-03	Abandoned Strip Mine (Landfill)	Other	199809
FTCH-04	Ark ANG Munition Burn Pit	Study Complete/No Cleanup Required	199903
FTCH-05	Rubble Fill Area	Other	199809
FTCH-06	Abandoned Rock Quarry Landfill	Study Complete/No Cleanup Required	199710
FTCH-07	Abandoned Rock Quarry 2 Landfill	Study Complete/No Cleanup Required	199710
FTCH-08	Old Well Area Disposal Pit	Other	199809
FTCH-10	Containerized Stg Area PCBs	Other	199809
FTCH-11	Wastewater Treatment Unit	Other	199809
FTCH-17	Vehicle Wash Rack Ditches	Other	199809
FTCH-18	EOD Site	Study Complete/No Cleanup Required	199710
FTCH-20	OB Grounds Thermal Trt Area	Study Complete/No Cleanup Required	199903
FTCH-21D	Waste Oil Stg Containers Bldg 2545	Not Eligible ER,A/BRAC Funding	199710
FTCH-21G	Waste Oil Stg Containers Bldg 2055	Not Eligible ER,A/BRAC Funding	199710
FTCH-26	Incinerator	Study Complete/No Cleanup Required	199710
FTCH-31	Sewage Pumping Station Acid Neut	Study Complete/No Cleanup Required	199710
FTCH-34	Oil Water Separators And USTs	Other	199809
FTCH-39	Contaminated Oil Trenches	Study Complete/No Cleanup Required	199903
FTCH-41	Defoliant Spray Areas	Land Use Controls are being used Funded under PBC with Camp Crowder	199903
FTCH-43	East Land Application Site	Study Complete/No Cleanup Required	200011
FTCH-47	Sanitary Sewer Lines	Other	199809

Initiation of IRP: 1987

Past Phase Completion Milestones

1987-2000

- PA/SI

1999

- NFA RODs issued (FTCH-03, 05, 06, 07, 08, 10, 11, 26, 31, 46, 47), May
- NFA RODs issued (FTCH-20, 21D, 21G, 34, 35, 39), December

2000

- NFA RODs issued (FTCH-17, 40), February
- NFA ROD issued (FTCH-43), November

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates: NA

Schedule for Next Five-Year Review: TBD

Estimated Completion Date of IRP (including LTM phase): 2030

FORT CHAFFEE IRP SCHEDULE

(Based on current funding constraints)

AEDB-R#	PHASE	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
FTCH-28	RD									
	RA									
	RA(O)									203009

Prior Years Funds

Total Funding up to FY04: \$469,000

Year	Site Information	Expenditures	FY Total
FY05		\$487,870	\$487,870

Total Funding Up To FY05: \$956,870

Current Year Requirements

Year	Site Information	Expenditures	FY Total
FY06		\$0K	\$0K

Total Funding FY06: \$0K

Total Future Requirements: \$35,330

Total IR Program Cost (from inception to completion of the IRP): \$992,200

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Restoration Advisory Boards

In January 1996 (FY96), a public meeting was held to educate the public on the concept of Restoration Advisory Boards (RABs) and to solicit participation in a RAB at Fort Chaffee. Applications for membership were handed out to attendees. A copy of the application form also was published in the local newspaper. Additional local interest was canvassed through press releases and paid advertisements.

Results

Close to 20 applications were received from members of the surrounding communities. The Installation Commander authorized the appointment of a selection panel. The selection panel reviewed the applications, conducted interviews, and proposed a membership selection list, which was approved by the Commander.

Conclusion

The Fort Chaffee RAB was officially established in April 1996, with 12 community members. The RAB has written its mission statement and established its working procedures. Future solicitation of public interest for additional members will be initiated by the RAB.

The RAB was established when Fort Chaffee was a U.S. Army Garrison. Now that the Enclave sites have been transferred to Fort Chaffee MTC, the RAB no longer has jurisdiction. A RAB has not been established for Enclave sites. However, a RAB could be formed as a vehicle for public involvement if future actions warrant.